National Clinical Audit of Specialist Rehabilitation following major Injury (NCASRI)

Summary of proposed contract extension plan

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Background

The National Clinical Audit for Specialist Rehabilitation following major Injury (NCASRI) was commissioned in 2015 by the Healthcare Quality Improvement Partnership (HQIP), as part of its National Clinical Audit and Patient Outcomes Programme (NCAPOP).

- It is undertaken against a background of continuing development of the Major Trauma Networks.
- It will determine the scope, provision, quality and efficiency of specialist rehabilitation services across England and improve the quality of care for adults with complex rehabilitation needs following major trauma.
- A key component is to link data from the Trauma Audit and Research Network (TARN) and the UK Rehabilitation Outcomes Collaborative (UKROC) datasets, in order to track individual patients along their journey from the Major Trauma Centres (MTCs) to the specialist (Level 1 and 2) rehabilitation services. It will identify the proportion of patients who actually received the specialist rehabilitation they required following major trauma, and it will examine the outcomes and cost efficiency of rehabilitation in these individuals.

NCAPOP audits are funded by NHS England, but overseen by the Healthcare Quality Improvement Partnership (HQIP). Contracts to deliver these audits are awarded by tender with funding usually for 3 years in the first instance, with potential to extended for a further 2 years, subject to agreement. There is an expectation that, following the initial investment, audits will become embedded in clinical practice going forward. **This document sets out our proposals for contract extension to years 4 and 5.**

NCASRI has 3 main elements in the first three years of funding:

1. An organisational audit to identify the current provision of specialist rehabilitation for trauma patients and to map the pathways of care into and out of these services.
2. A prospective clinical audit of new patients presenting within NHS MTCs who have complex needs and receive specialist inpatient rehabilitation.
3. A feasibility study for identifying the pathway and outcomes for patients who require specialist inpatient rehabilitation on discharge from MTCs, but do not subsequently attend.

It was acknowledged from the start that provision of rehabilitation had been introduced as something of an afterthought within many of the Major Trauma Networks (MTNs), and that the various underpinning national standards for rehabilitation of trauma patients were, for the most part, aspirational.

The low starting base of both service provision and data collection has posed significant challenges for NCASRI, and so a substantial part of the work within the first contracted period of the audit was expected to be developmental. The Second NCASRI Report describes some of these challenges, the steps that we have taken to overcome them and the lessons learned.

Lessons learned so far

A key finding from analysis of existing data has been that patients who received specialist in-patient rehabilitation after discharge from the MTCs may take up to 12 months to appear in the UKROC database. As originally contracted, the prospective audit in element 2 allowed for data linkage between TARN and UKROC at 6 months. We now know that this may miss up to 50% of patients and so could under-estimate the proportion receiving specialist rehabilitation. Future audits should be conducted over a 2-year cycle.

Throughout the first two years of NCASRI, we have listened to stakeholders (including the teams on the ground, patients and members of the public) in order to try to incorporate their feedback in our plans for future rounds of the audit.

The British Society of Rehabilitation Medicine recommended a Specialist Rehabilitation Prescription (SpRP). for patients with complex (Category A or B) rehabilitation needs, comprising five tools recording complexity, impairment, resource requirements and cares costs. The dataset for the first round of prospective clinical audit included all five tools and will provide critical information on the rehabilitation needs of catastrophically injured patients. However, this detailed dataset has proved unsustainable in clinical practice and there is evidence that data burden may have inhibited capture of all eligible patients. We have also identified some inconsistencies in the timing of data collection, which limits comparability. Some recorded the SpRP tools soon after admission to the MTC while others recorded them at discharge.

Concerns have been expressed about the highly specialised nature of NCASRI, confined as it is to the few patients with highly complex needs for specialist inpatient rehabilitation. There is particular concern that patients with complex non-neurological needs (eg complex pelvic fracture, multiple limb injuries) may have been missed. The original topic proposal was more widely based, but the scope was restricted to specialist rehabilitation by NHSE, partly to avoid duplication of the development work on the standard Rehabilitation Prescription (RP), which was on-going through the Clinical Reference Group (CRG) for Major Trauma. It was intended, however, that these parallel streams of work should come together more closely for year 4-5.

Working with stakeholders we have now defined a simplified core dataset that in future may be integrated into the standard RP as part of the required dataset for the best practice tariffs within the MTCs, and so be sustainable for long term implementation.

This approach would potentially expand the impact of NCASRI beyond the original target group of patients with complex needs for rehabilitation, and benefit also the wider population of patients with less complex needs (category C and D) needs requiring rehabilitation in their local and community services after trauma. It also has potential for wider application across other areas of care, such as neurosciences, critical care and acute stroke services.

Proposal for contract extension to years 4 and 5

The proposal for extension should be read in conjunction with the NCASRI Second Year Report

Aims and Objectives

The primary aims for the extension of the NCASRI audit are:

1. To complete the development of the audit tools and methodology in a manner that would be sustainable in routine clinical practice going forward.
2. To complete the first two rounds of audit with linkage over a sufficiently long timescale (2 years) to answer the important questions that we set out to address – namely, do patients with complex (Category A/B) needs for rehabilitation receive the specialist rehabilitation that they require and what are the outcomes?

Key objectives are:

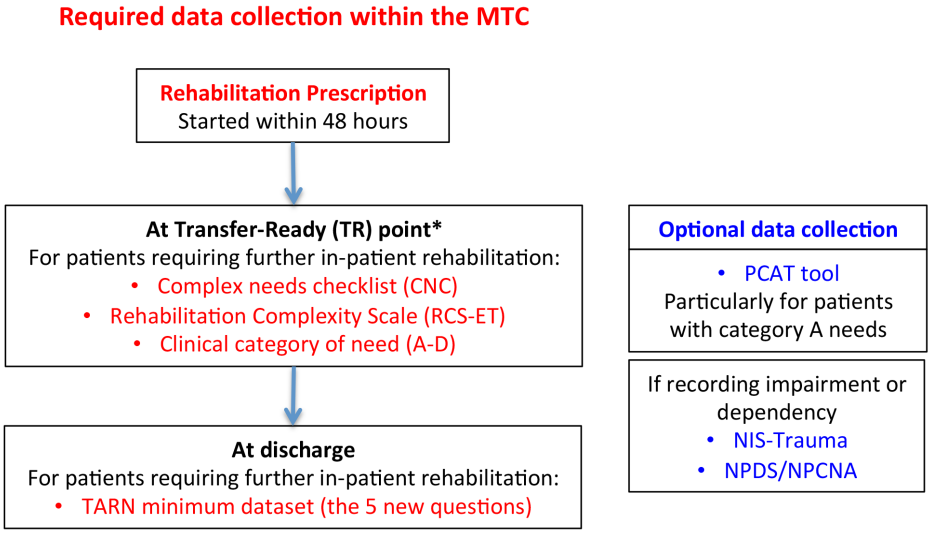
1. To engage all 22 MTCs and all Level 1 and 2 specialist rehabilitation services in the agreed data collection and reporting.
2. To integrate MTC data collection for NCASRI into the core dataset for the standard Rehabilitation Prescription. This will not only help to ensure future sustainability but will potentially broaden the scope of capture within the MTCs, to ensure that all patients with complex rehabilitation needs are identified, including those with non-neurological needs.
3. To test out the revised data collection algorithm, timelines and core dataset .
4. To consolidate MTC data collection in TARN and to established facility for automated data linkage between the existing data collection platforms in TARN and UKROC.
5. To develop systems for data reporting and benchmarking as part of routine clinical practice.

Audit design and time lines

Audit design will be as for the current NCASRI audit except:

- The required data collection within the MTCs will be restricted to a more manageable dataset comprising the Complex Needs Checklist (CNC), Rehabilitation Complexity Scale (RCS-ET) and clinical needs category, consistently collected at the 'TR' point, when the patient is ready for transfer to rehabilitation.
- Opportunities for further consolidation/reduction of the dataset will also be explored.
- We will work with the National Clinical Director (NCD) for Trauma and the Rehabilitation Prescription Task and Finish Group to integrate core data collection with the standard RP.
- Reporting of the other SpRP data will continue to be supported for centres that wish to use the more detailed tools for clinical decision-making, but this will be optional.
- All MTC data will be collated within the TARN database – data collected locally using IRMA or individual hospital computer databases to be entered onto TARN prior to data linkage.
- Within each audit cycle, data linkage between TARN and UKROC will be performed 12 months after discharge of the last recruited patient from the MTC.
- Data linkage with HES / ONS mortality data will be performed after the end of TARN UKROC data linkage, to collect data on all admissions within 12 months after discharge from the MTC in order to identify the alternative pathways of rehabilitation and care, insofar as these can be identified from existing data.
- We will continue to work with NHS Digital to explore the best way to identify admissions for rehabilitation within their centrally held datasets, including whether this information can be obtained from the Secondary Users Service (SUS).
- The proposed new scheme for MTC data collection is illustrated in Figure 1 below. A new data collection form is presented in our 2nd Year Report, and is also attached as Appendix 1.

Figure 1: Proposed new scheme for MTC data collection going forward



*The **TR point** is when the patient no longer needs to be in the acute MTC or TU setting and the primary need for further in-patient treatment is now rehabilitation

The audit will be conducted through 2-year cycles - with yearly cohorts but reporting every 2 years so that future rounds starting from September 2018 may be implemented as part of routine clinical practice. Figure 2a illustrates the proposed programme plan with its overlapping audit cycles. (Figure 2b also illustrates the programme plan for NCASRI if the extension is not granted – see below).

Figure 2a: Programme plan if contract is extended to year 4-5

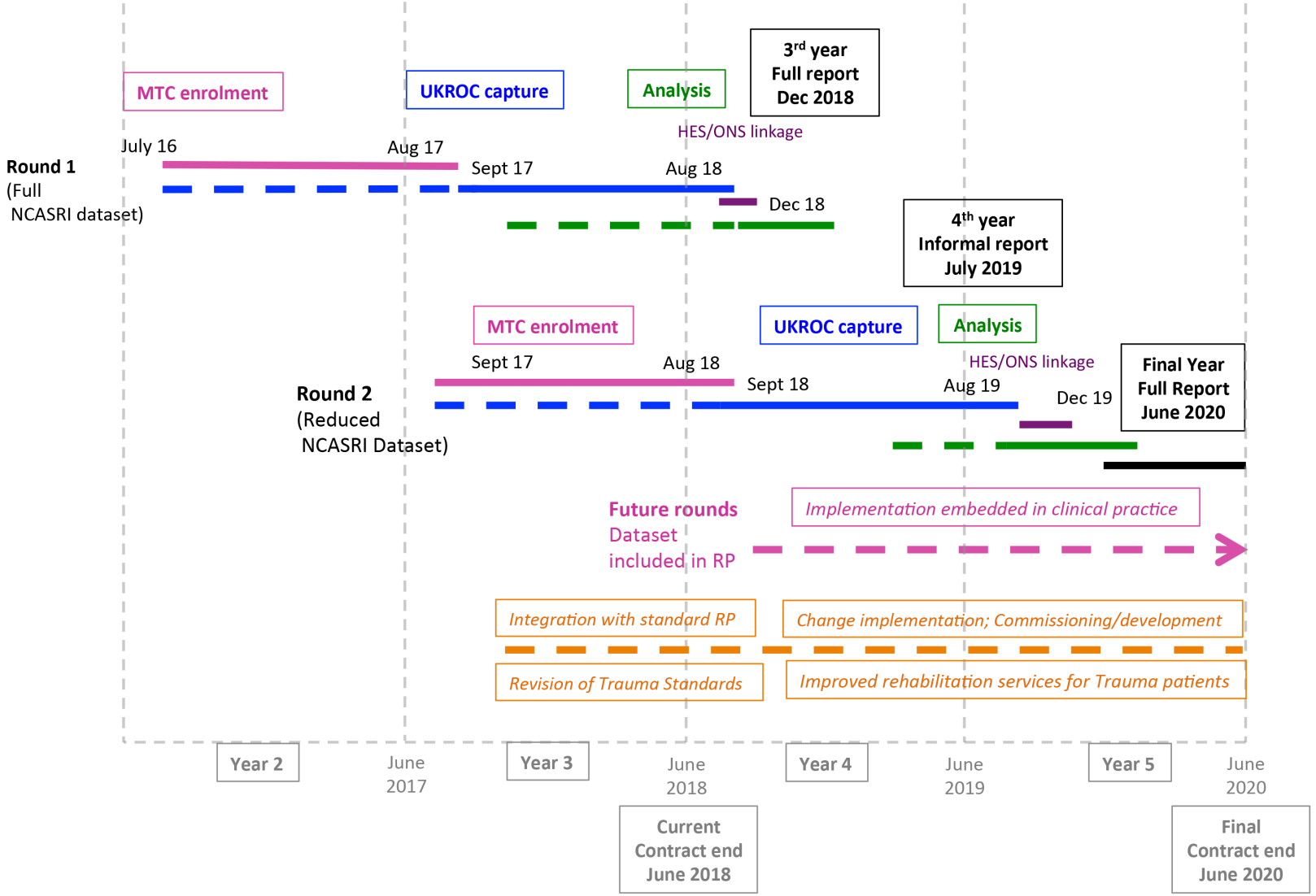
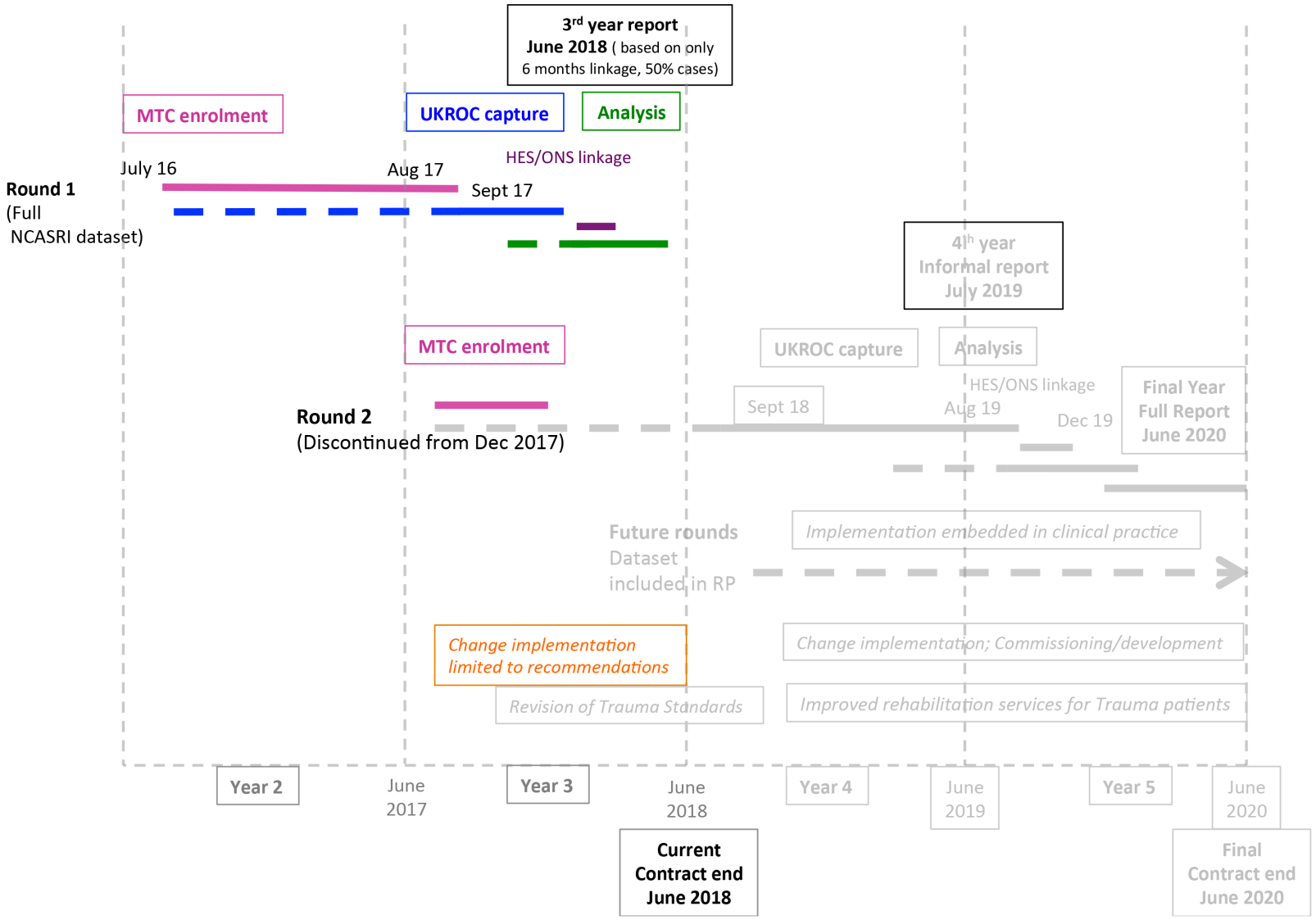


Figure 2b: Programme plan if contract is not extended to year 4-5 – Items in grey will not be delivered



Participation and patient recruitment

We will continue to work towards engaging all 22 MTCs in the audit data collection.

As for the first round of NCASRI, eligible patients will be those with category A or B needs for rehabilitation, but MTCs will be encouraged to report the core NCASRI dataset for all patients who still require in-patient rehabilitation at the Transfer ready (TR) point. In this way we aim to maximise capture of patients with category A and B needs, including those with non-neurological needs.

This approach will also capture patients with category C and D needs requiring Level 3 rehabilitation. We recognise that it will not be possible to capture rehabilitation outcomes for these patients as there is currently no system for collating outcomes from Level 3 services. However, at least we will be able to describe the types of needs for rehabilitation that would need to be met in those services. In addition, if the rehabilitation episodes can be identified from HES data, it may also be possible to see where they are currently being provided.

We estimate that this next round of NCASRI may capture between 1000 and 1200 eligible patients (ie with category A/B needs) per annum across all MTCs.

Reporting

As part of the contract extension, the NCASRI Programme Board has recommended that the 3rd Year Report should be delayed by 6 months until December 2018. This is to accommodate deferment of the final data linkages to 12 months (instead of 6 months) from discharge from the MTCs, in order to capture as many as possible of the patients who have received specialist rehabilitation within the UKROC database.

With respect to reporting for years 4 and 5, we propose:

- A 4th year report for dissemination in pdf form only (on the website) to be submitted at the end of year 4 in July 2019. This will provide an update on progress in further development including engagement of the MTCs, and linkage arrangements for the dataset. It will also report on progress on integration of the NCASRI dataset with the standard RP and implementation of other changes and quality improvements since the 3rd year report.
- A final published report submitted by the end of year 5 in June 2020 with the results of the second round audit and evidence of improved quality of care and outcomes for patients.

Stimulation of quality improvement:

There is already evidence that NCASRI has stimulated quality improvements in some centres. Data have been used to make the case locally for increased rehabilitation resources and bed capacity.

Embedding into NCASRI into clinical practice will improve the early identification of rehabilitation needs and appropriate referral, to make sure that patient receive timely rehabilitation to meet their individual needs. Improving patient flow will in turn and relieve pressure on the acute care services within the major trauma centres. We will therefore continue to work with TARN and the National Clinical Director for Trauma to integrate NCASRI with the standard RP in order to obtain meaningful clinical data that can be used for commissioning in the longer term. This will also help to extend these benefits to a larger proportion of patients, including those with category C/D needs.

The NHSE service specification for Specialist rehabilitation is due for review in 2018/19. We will work with the NHSE CRG and review panel to ensure that the needs of patients with complex needs following major trauma are specifically addressed in the revised specification. The data from NCASRI will be important for the planning of future service delivery.

Following publication of the 3rd and 5th year reports we will continue to work with local teams and commissioners to identify and address any issues with poor performance.

Longer term vision after the extension ends

As noted above, a key focus for the development of NCASRI over the first 2 years has been to create an audit process that and be built into routine clinical practice and this is sustainable after the end of the Audit project, through outline data reporting and national benchmarking using Dashboards etc. However, we are not there yet, and without this extension NCASRI is likely to founder after the end of the three-year programme.

We believe that by the time the second full round of audit is completed at the end of the 5 years, we should be in a position where sustainable data collection is built into routine clinical practice. Data linkage would be simplified to a level that would then support annual automated data reporting as part of the NHSE commissioned contracts with TARN and UKROC, if this is desired.

What will happen if the contract extension is not granted

If the extension is not granted, we will deliver the 3rd year report in June 2018 as originally planned and tendered, but this will have several adverse consequences as illustrated in Figure 2b:

With respect to the analysis and report of the first audit round:

- Because the final data linkage between TARN and UKROC will have to be done in Dec 2017, the proportion of patients accessing specialist in-patient rehabilitation is likely be under-estimated as up to 50% of the recruited patients will not yet have appeared in the UKROC database. The results may then be misleading
- MTC teams have worked valiantly to collect the detailed SpRP data for this first round and this will be the only opportunity we will have to link this detailed dataset with the UKROC outcomes. The effort and time that went into collecting the data for the remaining patients will be wasted.

With respect to round 2 and further audit cycles

- Recruitment for round 2 (which started in September) will be discontinued, as there is no point in recruiting patients whom we will not be able to follow through to linkage
- The vital further steps to embed NCASRI into clinical practice will not take place. It is unlikely that this would happen without NCASRI, so that the future possibility of capturing the information and extending the work to include the wider group of patients through integration with the RP will be lost.

An enormous amount of time and effect has been invested to get this audit off the ground – not only by the NCASRI team, but by the hard-pressed clinical teams within the MTCs. Failure to continue NCASRI would mean the loss of an important opportunity to improve the quality of rehabilitation offered to patients following major trauma and to maximise the final cost benefits of the excellent care that is provided by the MTCs in the acute stages following injury. We therefore hope and trust that NHSE will look kindly on the request for contract extension of NCASRI.

Appendix 1: The revised NCASRI core dataset tools – Data collection form

Complexity Needs Checklist and RCS-ET

NHS Number:		DOB:	
TARN Minimum dataset	Date of assessment:		

Rehabilitation Prescription completed
☐ Yes ☐ No

Presence factors affecting activities/participation
☐ Physical
☐ Cognitive/mood
☐ Psycho-social

Discharge Destination only if known:
☐ Level 1 or 2a Other.....
☐ Level 2b
☐ Level 3
☐ Trauma Unit
☐ Home

Does the patient have COMPLEX clinical needs?	Date of assessment:

Complex Physical eg	**Complex Cognitive / Mood** eg	**Complex Psychosocial** eg
❒ Complex musculoskeletal management ❒ Complex neuro-rehabilitation ❒ Complex amputee rehabilitation needs ❒ Re-conditioning / cardiopulmonary rehab ❒ Complex pain rehabilitation ❒ Profound disability / neuropalliative rehabilitation	❒ Complex communication support ❒ Cognitive assessment/management ❒ Complex mood evaluation/support ❒ Challenging Behaviour management ❒ Evaluation of Low Awareness state	❒ Complex discharge planning eg ○ Housing/placement issues ○ Major financial issues ○ Uncertain immigration status ❒ Major family distress/support ❒ Emotional load on staff

Checklist of needs that are likely to require specialist rehabilitation (tick any that apply) **(Examples)**		**Specialist needs?**
Specialist rehab medical (RM) or neuropsychiatric needs	☐ On-going specialist investigation/ intervention ☐ Complex / unstable medical/surgical condition ☐ Complex psychiatric needs ☐ Risk management or Treatment under section of the MHA	❒ Yes ❒ No
Specialist rehabilitation environment	☐ Co-ordinated inter-disciplinary input ☐ Structured 24 hour rehabilitation environment ☐ Highly specialist therapy /rehab nursing skills	❒ Yes ❒ No
High intensity	☐ 1:1 supervision ☐ ≥4 therapy disciplines required ☐ High intensive programme (>20 hours per week) ☐ Length of rehabilitation ≥ 3 months	❒ Yes ❒ No
Specialist Vocational Rehab	☐ Specialist vocational assessment ☐ Multi-agency vocational support (for return to work /re-training /work withdrawal) ☐ Complex support for other roles (eg single parenting)	❒ Yes ❒ No
Medico-legal issues	☐ Complex mental capacity / consent issues ☐ Complex Best interests decisions ☐ DoLs / PoVA applications ☐ Litigation issues	❒ Yes ❒ No
Specialist facilities / equipment needs	☐ Customised / bespoke personal equipment needs (eg Electronic assistance technology, communication aid, customised seating, bespoke prosthetics/orthotics) ☐ Specialist rehabilitation facilities (eg treadmill training, computers, FES, Hydrotherapy etc)	❒ Yes ❒ No

Provisional Categorisation of Rehabilitation Needs	
☐ **Category A** (requiring Level 1 or 2a Rehabilitation) ☐ **Category B** (requiring Level 2 Rehabilitation) ☐ **Category C or D** (requiring RR&R pathway)	**If probable category A or B needs,** refer for specialist rehabilitation review **Referred** Yes / No Date...../...../..... **Reviewed** Yes / No Date...../...../.....

Rehabilitation Complexity Score (RCS-ET - adapted) *(Only count highest score for Care **OR** Risk, not both)*						
Medical	**Care/Risk**	**Nursing**	**Therapy-Disciplines**	**Therapy-Intensity**	**Equipment**	**Total Score**
0 1 2 3 4 5 6	0 1 2 3 4 / 0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4	0 1 2 3	**...../25**

Completed by (please circle): Band 8 / Band 7/ Band 6/ Other:_____

*The circled items represent the only four data items relating to rehabilitation needs that were captured in TARN prior to the start of the NCASIRI audit